In the

United States Court of Appeals

For the Seventh Circuit

Nos. 03-1683, 03-1825, 03-2405

XCO INTERNATIONAL INC.,

Plaintiff-Appellant/Cross-Appellee,

v.

PACIFIC SCIENTIFIC COMPANY,

Defendant-Appellee/Cross-Appellant.

Appeals from the United States District Court
for the Northern District of Illinois, Eastern Division.
No. 01 CV 6851—**John W. Darrah**, *Judge*.

ARGUED DECEMBER 3, 2003—DECIDED MAY 24, 2004

Before FLAUM, *Chief Judge*, and POSNER and WILLIAMS, *Circuit Judges*.

POSNER, *Circuit Judge*. The appeal in this diversity breach of contract suit governed mainly by Illinois law presents issues involving the enforceability of a liquidated damages clause (found by the district judge to be a penalty), contract interpretation, patent law, and sanctions for making frivolous claims.

The plaintiff, XCO, owned U.S. and foreign (mainly European) patents on heat-sensitive cables. In 1991 it assigned the patents to the defendant, PacSci, which wanted to use them in making products for fire control and related uses. PacSci agreed to pay XCO $725,000 down, plus $100,000 or 5 percent of PacSci's sales of products utilizing the patented technology—whichever amount was greater—annually from 1995 through 2000; after that it would pay 5 percent of annual sales until the patents expired. As part of the deal, PacSci licensed the patents that it had just bought back to XCO for use in making heat-sensitive cables for lining refractory process vessels (used for processing petroleum products), which was the core of XCO's business, its principal market being in Europe. As the consideration for this license XCO agreed to pay PacSci $100,000 plus royalties on sales of the cables for the licensed use. The parties further agreed that PacSci would be "responsible for all expenses of any kind relating to" the patent rights that it was buying, including the fees charged by European patent authorities to maintain patents in effect. The U.S. Patent and Trademark Office charges patent-maintenance fees for U.S. patents, but payment of those fees is not in issue.

The agreement was to continue until the last of the patents expired in 2003. Beginning in 1993, however, just two years after the agreement had been signed, PacSci stopped paying maintenance fees on those patents that it wasn't using. It took the position that notwithstanding the "responsibility" clause of the contract, it could pick and choose which patents to keep alive. As a result, by 1998 a number of the patents had lapsed. XCO declared a breach that year and terminated the contract, as it was entitled to do (without liability) if in fact PacSci had committed a breach. A provision in a section of the contract captioned "Breach and Liquidated Damages" states that in the event of such a termination all money owed XCO by PacSci, "including such amounts which constitute overdue, delinquent or otherwise unpaid amounts . . . plus one hundred thousand dollars ($100,000) per year from and including the year of such termination to and including the year of the last to expire of the patent rights, shall then constitute liquidated damages under this Agreement." Another provision, also in the "Breach and Liquidated Damages" section, states that if XCO breaks the contract, PacSci will have no further obligations except to pay XCO any amounts that came due before the breach; in other words, from the date of a breach by XCO forward, PacSci would have a royalty-free license. So damages were specified for a breach by either party.

Because XCO terminated the contract in 1998 and the last patent expired in 2003, and because the $100,000 in liquidated damages was due in both the year in which the contract was terminated and the year in which the last patent expired, as well as in all the intermediate years, the clause, if valid, entitles XCO to $600,000 in damages. The district judge held that it is a penalty clause, hence invalid. He ruled so on summary judgment, while rejecting PacSci's interpretation of the "responsibility" clause. He found, in other words, that PacSci had broken the contract; but since XCO did not attempt to prove its actual damages, instead seeking only liquidated damages, XCO got no relief for the breach.

There is also a counterclaim. Beginning in 1998 XCO had begun manufacturing a somewhat different kind of heat-sensitive cable, for which it has applied for a patent. PacSci counterclaimed for royalties on XCO's sales of the new cable, citing a clause in the contract which states that PacSci is purchasing not only the patents listed in the contract but also "all purchasing, manufacturing, marketing, sales and installation information and materials including know-how, drawings, sketches, plans, designs, specifications, data, methods, processes, techniques, *inventions or discoveries* *whether patentable or not which relate in any way to the Products covered by the Patent Rights*" (emphasis added). Another clause, however, provides that if "any such additional proprietary subject matter is first conceived and / or reduced to practice by or on behalf of [XCO] during the term of this Agreement, then title thereto shall vest in and remain [XCO's] exclusive property." The district judge rejected the counterclaim, and PacSci has appealed that ruling. But the judge also rejected XCO's request for sanctions for the filing of the counterclaim; XCO had argued that the counterclaim was frivolous and in addition that PacSci was trying to inject into the case an issue of patent law—namely whether XCO's new patent (if issued) would infringe patents that it had assigned to PacSci— without complying with the standards laid down by the Federal Circuit for proving infringement. XCO claims to have incurred nearly $400,000 in legal fees and other expenses to defend against the counterclaim.

XCO's appeal challenges the district judge's denial of its motion for sanctions as well as his refusal to enforce the liquidated damages clause. In defending the latter ruling PacSci not only embraces the judge's penalty-clause determination but also argues that letting the patents lapse was not a breach of contract after all.

When damages for breach of contract would be difficult for a court to determine after the breach occurs, it makes sense for the parties to specify in the contract itself what the damages for a breach shall be; this reduces uncertainty and litigation costs and economizes on judicial resources as well. Indeed, even if damages wouldn't be difficult to determine after the fact, it is hard to see why the parties shouldn't be allowed to substitute their own ex ante determination for the ex post determination of a court. Damages would be just another contract provision that parties would be permitted to negotiate under the general rubric of freedom of contract.

One could even think of a liquidated damages clause as a partial settlement, as in cases in which damages are stipulated and trial confined to liability issues. And of course settlements are favored.

Yet it is a rule of the common law of contracts, in Illinois as elsewhere, that unless the parties' ex ante estimate of damages is reasonable, their liquidated damages provision is unenforceable as a penalty intended to "force" performance. *Bauer v. Sawyer*, 134 N.E.2d 329, 333 (Ill. 1956); *Checkers Eight Ltd. Partnership v. Hawkins*, 241 F.3d 558, 561-62 (7th Cir. 2001) (Illinois law); *Lake River Corp. v. Carborundum Co.*, 769 F.2d 1284, 1289-90 (7th Cir. 1985) (same); *Med+Plus Neck & Back Pain Center, S.C. v. Noffsinger*, 726 N.E.2d 687, 693 (Ill. App. 2000); see also *Truck Rent-A-Center, Inc. v. Puritan Farms 2nd, Inc.*, 361 N.E.2d 1015, 1017-19 (N.Y. 1977). The reason for the rule is mysterious; it is one of the abiding mysteries of the common law. At least in a case such as this, where both parties are substantial commercial enterprises (ironically, it is the larger firm, PacSci, that is crying "penalty clause"), and where damages are liquidated for breach by either party, making an inference of fraud or duress implausible, it is difficult to see why the law should take an interest in whether the estimate of harm underlying the liquidation of damages is reasonable. Courts don't review the other provisions of contracts for reasonableness; why this one?

It is true that if there is a very stiff penalty for breach, parties will be discouraged from committing "efficient" breaches, that is, breaches that confer a greater benefit on the contract breaker than on the victim of the breach, in which event breach plus compensation for the victim produces a net gain with no losers and should be encouraged. (This is a reason why injunctions are not routinely granted in contract cases—why, in other words, the party who breaks his contract is usually allowed to walk away from it, provided only that he compensates the other party for the cost of the breach to that party.) But against this consideration must be set the worthwhile effect of a penalty as a signal that the party subject to it is likely to perform his contract promise. This makes him a more attractive contract partner, since if he doesn't perform he will be punished severely. His willingness to assume that risk signals his confidence that he will be able to perform and thus avoid the penalty. It makes him a credible person to do business with, and thus promotes commerce.

Granted, the case for a contractual specification of damages is stronger the more difficult it is to estimate damages and so the greater the expense to the parties and the judiciary, and hence to society, of determining the plaintiff's damages by the clumsy and costly methods of litigation. That presumably is why the enforceability of liquidated damages clauses depends on the difficulty of estimating, when the contract is signed, what the damages will be if the contract is broken. Yet in such cases the plaintiff will often be able to obtain injunctive relief instead of damages, on the ground that his damages remedy is inadequate, that being the standard criterion for injunctive relief; and an injunction often has a punitive effect because the cost to the defendant of complying with it will often exceed the harm to the plaintiff from the enjoined conduct. The fact that injunctions are sometimes granted in contract cases shows, therefore, that "punishment" is not wholly alien to contractual remedies. At a minimum one might suppose penalty clauses tolerable to the extent that the penalty portion approximated the costs in attorneys' fees and other expenses of proving damages for breach of contract.

The explanation for the rule against penalty clauses may be purely historical—and "it is revolting to have no better reason for a rule of law than that so it was laid down in the time of Henry IV." O. W. Holmes, "The Path of the Law," 10 *Harv. L. Rev.* 457, 469 (1897). The slow pace at which the common law changes makes it inevitable that some common law rules will be vestigial, even fossilized. When a person comes into court seeking relief, the court naturally is inclined to ask why it should get involved in the matter. The court is busy, its resources limited. It wants to see some potential benefit from judicial intervention before it will lift a finger. The rules of contract law have remote origins, predating the era of freedom of contract and the ideology of free markets. Thus, when parties to contracts first sought damages for breach in cases in which the contract when broken had still been executory, courts declined to oblige; they couldn't see what harm had been done when the victim of the breach hadn't yet paid anything or begun to perform. *Flureau v. Thornhill*, 96 Eng. Rep. 635 (C.P. 1776); *Basiliko v. Pargo Corp.*, 532 A.2d 1346, 1348-49 (D.C. 1987); 3 E. Allan Farnsworth, *Farnsworth on Contracts* § 12.8, p. 192 (3d ed. 2004); Morton J. Horwitz, "The Historical Foundations of Modern Contract Law," 87 *Harv. L. Rev.* 917 (1974). They were not moved by the fact that the parties, presumably rational, had thought it in their mutual interest to be able to enter into an enforceable executory contract.

Similarly—though here the historical record is murkier because there was an early period in which penal bonds were enforced, 3 Farnsworth, *supra*, § 12.18, pp. 302-04; Horwitz, *supra*, 87 *Harv. L. Rev.* at 936-37; William H. Loyd, "Penalties and Forfeitures," 29 *Harv. L. Rev*. 117 (1915)—courts have had difficulty seeing what benefit would be conferred by awarding in effect punitive damages for breach of contract. Because liability for breach is strict (though the strictness is somewhat ameliorated by such defenses as impossibility and frustration), contract breakers often are innocent in a moral sense. Breach of contract is not a tort, so should not be punished—or so the reasoning goes.

The rule against penalty clauses, though it lingers, has come to seem rather an anachronism, especially in cases in which commercial enterprises are on both sides of the contract. As we noted in *Operating Engineers Local 139 Health Benefit Fund v. Gustafson Construction Corp.*, 258 F.3d 645, 655 (7th Cir. 2001), "it is easy to assign nonexploitive reasons for contractual penalties and hard to give convincing reasons why in the absence of fraud or unconscionability consenting adults that are, moreover, substantial organizations rather than mere consumers should be prohibited from agreeing to such provisions." See also *Lawyers Title Ins. Corp. v. Dearborn Title Corp.,* 118 F.3d 1157, 1160-61 (7th Cir. 1997); *Lake River Corp. v. Carborundum Co., supra*, 769 F.2d at 1288-89. The rule hangs on, but is chastened by an emerging presumption against interpreting liquidated damages clauses as penalty clauses. *MetLife Capital Financial Corp. v. Washington Ave. Associates L.P.*, 732 A.2d 493, 499-500 (N.J. 1999); *Circle B Enterprises, Inc. v. Steinke*, 584 N.W.2d 97, 101 (N.D. 1998); *Wallace Real Estate Investments, Inc. v. Groves*, 881 P.2d 1010, 1013-14 (Wash. 1994); *Rohlin Construction Co. v. City of Hinton*, 476 N.W.2d 78, 79-80 (Iowa 1991); *Pierce v. B & C Electric, Inc.*, 432 N.E.2d 964, 966 (Ill. App. 1982); 24 Richard A. Lord, *Williston on Contracts*, § 65:13 (4th ed. 2004); cf. *Penske Truck Leasing Co. v. Chemetco, Inc.*, 725 N.E.2d 13, 20 (Ill. App. 2000); *Pav-Saver Corp. v. Vasso Corp.*, 493 N.E.2d 423, 427-28 (Ill. App. 1986); but cf. *Checkers Eight Ltd. Partnership v. Hawkins*, *supra*, 241 F.3d at 563 (Illinois law).

Whatever the strength and contours of the rule in Illinois today, PacSci is wholly in error in arguing that a liquidated damages clause is invalid unless it recites, or extrinsic evidence shows, that the parties determined that, yes, it really would be difficult to determine damages for breach after the breach occurred. No case in Illinois or anywhere else so holds or implies, and the rejection of the argument is implicit in the numerous cases that hold such clauses valid which do not contain such recitals, even when there is no extrinsic evidence to fill the gap. See, e.g., *First National Bank v. Atlantic Tele-Network Co.*, 946 F.2d 516, 518, 521-22 (7th Cir. 1991); *Penske Truck Leasing Co. v. Chemetco, Inc.*, *supra*, 725 N.E.2d at 18-20; *In re Graham Square, Inc.*, 126 F.3d 823, 828-30 (6th Cir. 1997). PacSci has tried to reverse the burden of proof, which, as in the case of other affirmative defenses, rests on the party resisting enforcement of a liquidated damages clause to show that the agreed-upon damages are clearly disproportionate to a reasonable estimate of the actual damages likely to be caused by a breach. E.g., *Weiss v. United States Fidelity & Guaranty Co*., 132 N.E. 749, 751 (Ill. 1921); *Pace Communications, Inc. v. Moonlight Design, Inc.*, 31 F.3d 587, 594 (7th Cir. 1994); *First National Bank v. Atlantic Tele-Network Co.*, *supra*, 946 F.2d at 521-22; *Pav-Saver Corp. v. Vasso Corp*., *supra*, 493 N.E.2d at 427; *Honey Dew Associates, Inc. v. M & K Food Corp*., 241 F.3d 23, 26-27 (1st Cir. 2001); *Joseph F. Sanson Investment Co. v. 268 Ltd.*, 795 P.2d 493, 497 (Nev. 1990).

The burden of proving the invalidity of the liquidated damages clause in the contract with XCO thus remained on PacSci and it is apparent from the nature of the breach of contract—failing to pay patent-maintenance fees, as a predictable result of which the patents lapsed—that PacSci failed to carry it. And breach it was; PacSci's argument that because it was made "responsible" for the fees it could decide not to pay them—an interpretation that deprives the "responsibility" clause of all force, as well as wreaking semantic havoc ("responsibility" signifies duty, not right)—does not merit discussion.

The premature lapse of XCO's European patents exposed XCO to competition that the patents, had they remained valid, might well have prevented—or might not have. That would be a costly and uncertain issue for a court to resolve. About all the court could say would be that given the scale of XCO's operations, $100,000 a year from the breach to the termination of the last patent was not an outlandish estimate of the damages that XCO might sustain as a result of PacSci's allowing the patents to lapse. This case thus illustrates how a liquidated damages clause can spare the parties and the court the anxiety and expense of protracted and uncertain remedy proceedings. Cf. *First National Bank v. Atlantic Tele-Network Co.*, *supra*, 946 F.2d at 521-22; *JKC Holding Co. LLC v. Washington Sports Ventures, Inc.*, 264 F.3d 459, 468 (4th Cir. 2001); *Farmers Export Co. v. M/V Georgis Prois, Etc.*, 799 F.2d 159, 164-65 (5th Cir. 1986).

The element common to most liquidated damages clauses that get struck down as penalty clauses is that they specify the same damages regardless of the severity of the breach. *Checkers Eight Ltd. Partnership v. Hawkins*, *supra*, 241 F.3d at 562; *Lake River Corp. v. Carborundum Co.*, *supra*, 769 F.2d at 1290; *M.I.G. Investments, Inc. v. Marsala*, 414 N.E.2d 1381, 1386 (Ill. App. 1981); *Kalenka v. Taylor*, 896 P.2d 222, 228-29 (Alaska 1995). One can see the problem: if a contract provides that breaches of different gravity shall be sanctioned with equal severity, it is highly likely that the sanction specified for the mildest breach is a penalty (that, or the sanctions for all the other possible breaches must be inadequate). That would have been the case here if instead of fixing the damages at $100,000 per year, the damages clause had recited for example that in the event of breach PacSci must pay XCO $500,000, period. Then if PacSci failed to pay only the maintenance fee due six months before the last patent expired, it would owe the same damages that it would owe had it never paid any of the maintenance fees and as a result all of XCO's patents had lapsed within a year after the contract was signed. That isn't how the clause works. Instead, by proportioning damages to the remaining life of the patents, it sanctions PacSci more heavily the longer the life that remained to them when PacSci allowed them to lapse. *American National Bank & Trust Co. v. Regional Transportation Authority*, 125 F.3d 420, 439-40 (7th Cir. 1997); *Penske Truck Leasing Co. v. Chemetco, Inc.*, *supra*, 725 N.E.2d at 19-20; *Builder's Concrete Co. v. Fred Faubel & Sons, Inc.*, 373 N.E.2d 863, 869 (Ill. App. 1978); *Information Systems & Networks Corp. v. City of Kansas City*, 147 F.3d 711, 715 (8th Cir. 1998).

Yet the proportionality of the damages specification highlights by way of contrast the only halfway decent argument that PacSci has against the validity of the liquidated damages clause. This is that the clause fails to differentiate between different *kinds* of breach, some more serious than others, as distinct from different degrees of seriousness within a given kind. Suppose the breach had taken the form of PacSci's failing not to keep the patents in force but to make a royalty payment of $1,000 when it was due. The liquidated damages clause read literally would require PacSci not only to pay the $1,000 but to pay $100,000 on top of it for each year from the breach to the expiration of the last patent. That would be pretty outlandish—depending on the date of breach it could cost PacSci more than $1 million though it had harmed XCO to the tune of $1,000 at most—but it is an argument not for invalidating the clause but for interpreting it reasonably. It is apparent from the reference in the clause to the date of expiration of the last patent that the $100,000 a year damages provision is intended only for the case in which a breach by PacSci endangers the patents. It is not intended for other breaches, such as failure to pay agreed-upon amounts.

Even if the clause were read literally, and as a result would be deemed a penalty if invoked in a case in which the breach consisted merely of a failure to pay royalties or other amounts due under the contract to XCO, the proper judicial remedy would be to reform the clause to limit it to those breaches, such as the one that occurred in this case, for which it constituted a reasonable specification of damages. There would be no reason to invalidate the clause in its entirety. See *United Air Lines, Inc. v. Austin Travel Corp.*, 867 F.2d 737, 741 (2d Cir. 1989); *American Multi-Cinema, Inc. v. Southroads, L.L.C.*, 119 F. Supp. 2d 1190, 1205-07 (D. Kan. 2000); 24 *Williston on Contracts*, *supra*, § 65:18.

We turn to PacSci's counterclaim and the connected issue of sanctions for its filing. The district judge was correct to reject the counterclaim. It is true that the first proprietary-rights clause that we quoted early in this opinion is extremely broad, but it is qualified by the subsequent clause that entitles XCO to obtain and retain *new* proprietary matter, including new patents, as distinct from the patents transferred by the agreement and the associated know-how to enable PacSci to practice those patents as well as such associated inventions as would enable PacSci to obtain the maximum benefit from the patents that it was buying. Not only is the contract reasonably clear when the two provisions are read together, but XCO, which is an inventor rather than a producer (it contracts out production), would be unlikely to agree to give up all its future inventions for the entire 12-year life of the contract, however remotely related they were to the subject matter of the transferred patents. Cf. *Ingersoll-Rand Co. v. Ciavatta,* 542 A.2d 879, 887, 895-96 (N.J. 1988); *Dispatch Automation, Inc. v. Richards*, 280 F.3d 1116, 1117-19 (7th Cir. 2002); *New Britain Machinery Co. v. Yeo*, 358 F.2d 397, 405 (6th Cir. 1966). That would pretty much put XCO out of business, as it would have no incentive to be inventing for the benefit of PacSci without being compensated. There is no indication that XCO was intending to commit corporate suicide. Contract interpretations that produce commercially unreasonable results are disfavored, not as a matter of policy but simply because they are implausible to impute to the parties. *FutureSource LLC v. Reuters Ltd.*, 312 F.3d 281, 284-85 (7th Cir. 2002); *Level 3 Communications, Inc. v. Federal Ins. Co.*, 168 F.3d 956, 958 (7th Cir. 1999); *Outlet Embroidery Co. v. Derwent Mills*, 172 N.E. 462, 463 (N.Y. 1930) (Cardozo, C.J.); *McMahon v. Chicago Mercantile Exchange*, 582 N.E.2d 1313, 1320 (Ill. App. 1991).

This principle of interpretation must be used cautiously because there is always a danger that what seems commercially unreasonable to a court did not seem so to the parties. PacSci might have tried to show that the consideration it gave XCO for the patents was so generous in relation to the scale, profitability, and prospects of XCO's business that it must surely have covered future inventions. PacSci presented no such evidence.

But what if XCO, seeking to defeat PacSci's contract rights, sought a patent on a "new" invention that wasn't really new—that duplicated and thus infringed one or more of the patents that it had sold PacSci—and claimed the right to sell, use, or license the new invention? The patent would not be granted, or if granted would be invalidated by a court; and just the attempt to patent such an invention would violate the requirement of good-faith dealing that Illinois law reads into every contract. *Cramer v. Insurance Exchange Agency*, 675 N.E.2d 897, 902-03 (Ill. 1996); *Wolf v. Federal Republic of Germany*, 95 F.3d 536, 543 (7th Cir. 1996) (Illinois law); *Beraha v. Baxter Health Care Corp.*, 956 F.2d 1436, 1443-45 (7th Cir. 1992) (same).

Under the patent doctrine of equivalents, a subsequent inventor cannot escape a finding of infringement by pointing to immaterial variations between his invention and an already patented one. *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997); *Riles v. Shell Exploration & Production Co.*, 298 F.3d 1302, 1309-11 (Fed. Cir. 2002). Thus in *International Nickel Co. v. Ford Motor Co*., 166 F. Supp. 551, 563-65 (S.D.N.Y. 1958), the plaintiff had a patent on "nodular iron," an alloy that was .04 percent magnesium. Ford began making its own version of nodular iron, which differed from the plaintiff's only in containing half as much magnesium. The court held that Ford had infringed the plaintiff's patent; Ford's variant was "equivalent" to the patented product. XCO, however, points out that the components, proportions, production methods, and so forth specified in its new patent application differ from those in the patents assigned to PacSci, yet PacSci made no effort to show that the differences were immaterial and thus that XCO was seeking to circumvent its transfer of the old inventions to PacSci.

We note parenthetically that if PacSci were challenging in a complaint for breach of contract the validity of an issued patent, this appeal would have to go to the Federal Circuit rather than to this court. 28 U.S.C. §§ 1295(a)(1), 1338(a); *U.S. Valves, Inc. v. Dray*, 212 F.3d 1368, 1372 (Fed. Cir. 2000); *U.S. Valves, Inc. v. Dray*, 190 F.3d 811, 813-14 (7th Cir. 1999). But a challenge to the validity of a patent made in a counterclaim instead of a complaint is not within the Federal Circuit's exclusive jurisdiction, *Holmes Group, Inc. v. Vornado Air Circulation Systems, Inc.*, 535 U.S. 826, 829-32 (2002)—and anyway the new XCO patent hasn't, as far as we can tell, been issued yet, and it may never be. PacSci rightly insists that it is not challenging the validity of any patent (though it confuses the issue horribly by referring to "claims construction" in its reply brief, which is patent talk, though PacSci apparently meant to refer rather to the "claims" made in its counterclaim); it is only contending that the contract requires that if any patent issues it must be assigned to PacSci and that the filing of the patent application shows bad faith on XCO's part. The first argument misreads the proprietary-rights clauses (if the invention sought to be patented is a genuine improvement, it belongs to XCO, and if it's not, it's not patentable), and the second founders on PacSci's failure to prove that the new invention steps on the toes of any of the transferred patents.

The counterclaim is thin, to say the least; it borders on the frivolous. But it does not quite cross the line—or so at least the district judge was entitled to conclude without being thought to have abused his discretion. The proprietary-rights language in the contract is not entirely clear, and PacSci had at least some ground for suspicion that the development of the new product was intended to circumvent the assignment of the old patents to it. PacSci failed to substantiate its theory, so it lost, but that does not mean that the theory and claim were frivolous.

The theory underlying the counterclaim has a bearing on the issue of the validity of the liquidated damages clause, and so we return to that issue briefly. After PacSci allowed XCO's European patents to lapse, a European company called Thermocoax started selling a product that competed with XCO's refractory-vessel cables (the major market for which, we said, is European), and as a result XCO's revenues plummeted by hundreds of thousands of dollars a year. XCO used this episode to argue that the liquidated damages clause was valid even if the clause didn't estimate damages reasonably at the time the contract was made, because it estimated them reasonably at the time of breach, and the trend in contract law is—very sensibly, as it seems to us—to allow a showing of ex post reasonableness to save the clause. *Restatement (Second) of Contracts* § 356(1) (1981); 3 Farnsworth, *supra*, § 12.18, pp. 309-10; *Lawyers Title Ins.*

Corp. v. Dearborn Title Corp., *supra*, 118 F.3d at 1161-62 (Illinois law); *Yockey v. Horn*, 880 F.2d 945, 951-54 (7th Cir. 1989) (same); *Pav-Saver Corp. v. Vasso Corp., supra*, 493 N.E.2d at 427. PacSci counters that since by the time Thermocoax entered the European market XCO was selling the product that is the subject of its new patent application, the lapse of its old patents could not have harmed it. But that doesn't follow, since we are told nothing about Thermocoax's product. And although the filing of a patent application provides some protection, at least under U.S. law, 35 U.S.C. § 154(d); 1 John Gladstone Mills III, Donald C. Reiley III & Robert C. Highley, *Patent Law Fundamentals* § 1:38 (2d ed. 2004), the protection evaporates if the patent is not granted. For all we know, Thermocoax's product would have infringed one of the old patents that had, however, by this time lapsed through PacSci's breach of contract, opening the way for Thermocoax to enter the market and clobber XCO.

We conclude that XCO is entitled to its liquidated damages but not to sanctions and that the rejection of PacSci's counterclaim must stand. The judgment is affirmed in part and reversed in part and the case is remanded to the district court for the entry of a new judgment consistent with this opinion.

A true Copy:

Teste:

Clerk of the United States Court of Appeals for the Seventh Circuit